UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/766,895	12/13/1996	DAVID S. DUNNING	42390.P3991	8024

7590 11/02/2004

AL AU YEUNG
BLAKELY SOKOLOFF TAYLOR & ZAFMAN
SEVENTH FLOOR
12400 WILSHIRE BOULEVARD
LOS ANGELES, CA 90025

EXAMINER	
NGUYEN, STEVEN H D	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/766,895	DUNNING ET AL.	
	Examiner	Art Unit	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 6/17/04 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Yuang (USP 5442474).

Regarding claim 1, Huang teaches the step of receiving at a switch (500) a packet (packet frame, figure 2) of binary digital signals as encoded binary digital signals including a bit pattern (routing bits) chosen so that the bit pattern (routing bits) directly provides information regarding routing the packet through the network in its encoded form (see the col. 3, lines 47-53) and copying said bit pattern at least for decoding (see the copying of routing bits by detector 520 for

decoding purposes). Huang clearly teaches that the routing bit pattern is made unique by using a routing bits encoded binary form in such a way that it can be readily detected (directly provides information) and use to route the packet. Furthermore, Huang's routing bits also directly provide routing information in its encoded form (see col. 6, line 14-31 and col. 6, line 59 to col. 7, line 20). The combination of two binary routing bits simply provide four possible paths for each packet, e.g. 00 takes first path, 01 takes second path, etc. Decoding is not needed. The receiver does not need a decoder to use this routing bits.

Regarding claim 2, the received binary digital signal is decoded by node 500.

Regarding claim 3, figure 5 shows that the node receives the binary signal serially, and the deserialization is performed by DEMUX's 500, 551 and 552.

Regarding claim 4, the received encoded binary digital signals is deserialized and translated into for binary digital signals as shown in four output paths in figure 5.

Regarding claim 5, the deserialized and translated binary digital signals are routed to four different output paths as shown in figure 5.

Regarding claims 6 and 7, the output paths of node 500 are connected to other node (switches) in the network to route the output signals to their intended destinations.

Regarding claim 8, the encoded binary digital signals used to route the packet through the network comprises an encoded destination address (routing bits).

Regarding claim 9, the encoded binary digital signals used to route the packet through the network comprise encoded binary digital signal specifying a route through the network if decoded (see the use of the routing bits of the encoded signals for specifying a route).

Regarding claim 10, Huang teaches a switch (500) adapted to receive a packet (packet frame, figure 2) of binary digital signals as encoded binary digital signals including a bit pattern (routing bits) so that the bit pattern (routing bits) directly provides information regarding routing the packet through the network in its encoded form (see col. 3, lines 47-53) and to copy said bit pattern at least for decoding (see the copying of routing bits by detector 520 for decoding purposes). Huang clearly teaches that the routing bit pattern is made unique so that it can be readily detected (directly provides information) in encoded form. It is further noted that the routing bits are used to specify how the packet is to be routed through the network. It is further noted that the claimed "bit pattern chosen so that the bit pattern directly provides information regarding routing the packet" can also read on Huang's routing bits for the following reason: Huang's routing bits also directly provide routing information in its encoded form (see col. 6, line 14-31 and col. 6, line 59 to col. 7, line 20). The combination of two binary routing bits simply provide four possible paths for each packet, e.g. 00 takes first path, 01 takes second path, etc. Decoding is not needed. The receiver does not need a decoder to use these routing bits.

Regarding claim 11, the switch (500) serially receives the packet (packet frame, figure 2) and serially copies the encoded binary digital signals to route the packet through the network (see the copying of routing bits of the received signal for determining how to route the packet in figure 5).

Regarding claim 12, the switch (500) further adapted to decode and the deserialize the copied encoded binary digital signals (see the decoding and deserializing of the received encoded signal by blocks 510, 520 550, 551 and 552 in figure 5).

Regarding claim 13, the received encoded binary digital signals is translated into four binary digital signals as shown in four output paths in figure 5.

Regarding claim 14, the output paths of node 500 are connected to other nodes in the network to route the output signals to their intended destinations.

Regarding claim 15, the encoded binary digital signals used to route the packet through the network comprises an encoded destination address (routing bits).

Regarding claim 16, the encoded binary digital signals used to route the packet through the network comprise encoded binary digital signal specifying a route through the network if decoded (see the use of the routing bits of the encoded signals for specifying a route).

Regarding claim 17, Huang teaches step of receiving at a switch (500) a packet (packet frame, figure 2) of binary digital signals as encoded binary digital signals including a bit pattern (routing bits) so that the bit pattern (routing bits) directly provides information regarding routing the packet through the network in its encoded form (see col. 3, lines 47-53) without decoding. Huang clearly teaches that the routing bit pattern is made unique so that it can be readily detected (directly provides information). It is further noted that the routing bits are used to specify how the packet is to be routed through the network. It is further noted that the claimed "bit pattern chosen so that the bit pattern directly provides information regarding routing the packet" can also read on Huang's routing bits for the following reason: Huang's routing bits also directly provide routing information in its encoded form (see col. 6, line 14-31 and col. 6, line 59 to col. 7, line 20). The combination of two binary routing bits simply provide four possible paths for each packet, e.g. 00 takes first path, 01 takes second path, etc. Decoding is not needed. The receiver does not need a decoder to use these routing bits.

Regarding claim 18, the encoded binary digital signals used to route the packet through the network without decoding comprises a portion of the header (H1, H2; figure 2) of the packet.

Regarding claim 19, the binary digital signals are routed to four different output paths as shown in figure 5.

Regarding claims 20 and 21, the output paths of node 500 are connected to other nodes (switches) in the network to route the output signals to their intended destinations.

Regarding claim 22, Huang teaches a switch (500) adapted to receive a packet (packet frame, figure 2) of binary digital signals as encoded binary digital signals including a bit pattern (routing bits) so that the bit pattern (routing bits) directly provides information regarding routing the packet through the network in its encoded form (see col. 3, lines 47-53) without decoding. Huang clearly teaches that the routing bit pattern is made unique so that it can be readily detected (directly provides information). It is further noted that the routing bits are used to specify how the packet is to be routed through the network. It is further noted that the claimed "bit pattern chosen so that the bit pattern directly provides information regarding routing the packet" can also read on Huang's routing bits for the following reason: Huang's routing bits also directly provide routing information in its encoded form (see col. 6, line 14-31 and col. 6, line 59 to col. 7, line 20). The combination of two binary routing bits simply provide four possible paths for each packet, e.g. 00 takes first path, 01 takes second path, etc. Decoding is not needed. The receiver does not need a decoder to decode these routing bits.

Regarding claim 23, the encoded binary digital signals used to route the packet through the network without decoding comprises a portion of the header (H1, H2; figure 2) of the packet.

Regarding claim 24, the binary digital signals are routed to four different output paths as shown in figure 5.

Regarding claim 25, Huang teaches a routing unit (100) adapted to produce to be included in a packet (packet frame, figure 2) binary digital signals as encoded binary digital signals including a bit pattern (routing bits) chosen so that when the bit pattern (header bits) is encoded it directly provides information regarding routing the packet through the network in its encoded form (see col. 3, lines 47-53) without decoding. Huang clearly teaches that the routing bit pattern is made unique so that it can be readily detected (directly provides information). It is further noted that the routing bits are used to specify how the packet is to be routed through the network. It is further noted that the claimed "bit pattern chosen so that the bit pattern directly provides information regarding routing the packet" can also read on Huang's routing bits for the following reason: Huang's routing bits also directly provide routing information in its encoded form (see col. 6, line 14-31 and col. 6, line 59 to col. 7, line 20). The combination of two binary routing bits simply provide four possible paths for each packet, e.g. 00 takes first path, 01 takes second path, etc. Decoding is not needed. The receiver does not need a decoder to use these routing bits.

Regarding claim 26, routing unit.(100) is a network interface component since it is used to interface with the network.

Regarding claim 27, routing unit (100) is coupled to a switch (130, 500) adapted to route a packet (packet frame, figure 2) of binary digital signals through the network in accordance with the encoded binary digital signals including a bit pattern (routing bits) so that the bit pattern

(header bits) directly provides information regarding routing the packet through the network in its encoded form (see col. 3, lines 47-53) without decoding (see figures 1 and 5).

Response to Arguments

4. Applicant's arguments filed 6/17/04 have been fully considered but they are not persuasive.

In response to page 3-4, the applicant states that Huang fails to disclose (1) encoded binary signals and (2) copying the bit pattern, at least for decoding. In reply, with respect to (1), Haung discloses the information on the network specially routing bits are in the binary form such as 0 and 1 which is encoded to become a binary information "reads on encoded binary signals"; with respective (2), Haung discloses the routing bits is copied by ref 520, 530 and 540 of Fig 5 and decoding to the information in order to generate a selection signal. Furthermore, See the board appeal decision on pages 8-10 of second rationale.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Waclawsky (EP 0669736) discloses a method and system for receiving a bit stream such packet, frame, cell etc.. for storing in the buffer and copying the routing information to event drive interface to generate a control signal, by decoding, for switch the bit stream to its destination in encoded form.

Abali (USP 5721820) discloses a method and system for receiving a bit stream such packet, frame etc.. for storing in the buffer and copying the routing information to a routing logic for decoding and generating a control signal for switch the bit stream to its destination in encoded form.

Abali (USP 5355364) discloses a method and system for receiving a bit stream such packet, frame etc.. for storing in the buffer and copying the routing information to a routing logic for decoding and generating a control signal for switch the bit stream to its destination in encoded form.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
10/27/04